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(54) **Light source drive device, display apparatus, and light source drive method**

(57) A light source drive device includes a supply unit that supplies a high-frequency first drive signal and a second drive signal whose frequency is lower than a frequency of the first drive signal to a discharge lamp which has a pair of electrodes, and a control unit that controls the supply unit so that the second drive signal is supplied during a second period after the first drive signal is supplied during a first period and the second period is lengthened as a voltage between the pair of electrodes is increased. It is preferable that the second period be longer than two minutes.

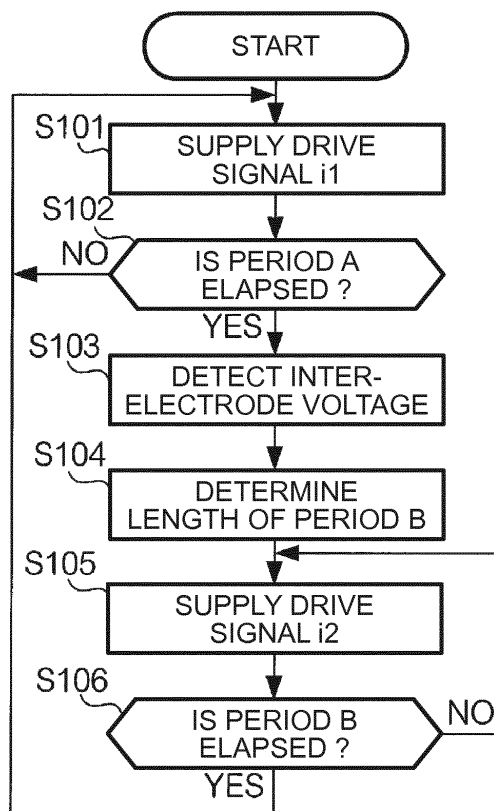


FIG. 6

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EUROPEAN SEARCH REPORT

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 2011/128508 A1 (YAMADA KOJI [JP] ET AL) 2 June 2011 (2011-06-02)	1,4-8	INV. H05B41/292
Y	* paragraphs [0072], [0081], [0157] - [0162]; figures 7,21-23 *	2,3	
Y,D	JP 2012 014995 A (IWASAKI ELECTRIC CO LTD) 19 January 2012 (2012-01-19) * abstract; figure 2 *	1-8	
Y	US 2010/084987 A1 (YAMAUCHI KENTARO [JP] ET AL) 8 April 2010 (2010-04-08) * figure 22A *	1-8	
Y	US 2004/000880 A1 (OZASA MINORU [JP] ET AL) 1 January 2004 (2004-01-01) * paragraphs [0009], [0066]; claims 1,3,4 *	1-8	
			TECHNICAL FIELDS SEARCHED (IPC)
			H05B
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
Munich		23 October 2015	Müller, Uta
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone		T : theory or principle underlying the invention	
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A : technological background		D : document cited in the application	
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P : intermediate document		& : member of the same patent family, corresponding document	

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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

23-10-2015

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2011128508 A1	02-06-2011	CN 102088816 A	08-06-2011
		JP 4992994 B2	08-08-2012
		JP 2011138742 A	14-07-2011
		KR 20110061496 A	09-06-2011
		TW 201123985 A	01-07-2011
		US 2011128508 A1	02-06-2011

JP 2012014995 A	19-01-2012	NONE	

US 2010084987 A1	08-04-2010	JP 5515479 B2	11-06-2014
		JP 2010114064 A	20-05-2010
		US 2010084987 A1	08-04-2010

US 2004000880 A1	01-01-2004	CN 1459998 A	03-12-2003
		JP 2003338394 A	28-11-2003
		US 2004000880 A1	01-01-2004

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EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82